UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/819,091	02/16/2000	Yongwei Cao	16517.124	5196

28381 7590 09/08/2004

ARNOLD & PORTER LLP
ATTN: IP DOCKETING DEPT.
555 TWELFTH STREET, N.W.
WASHINGTON, DC 20004-1206

EXAMINER	
MYERS, CARLA J	

ART UNIT	PAPER NUMBER
1634	

DATE MAILED: 09/08/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/819,091	CAO ET AL.	
	Examiner	Art Unit	
	Carla Myers	1634	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *14 June 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1 and 8-11* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1 and 8-11* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

1. This action is in response to the amendment filed June 14, 2004. Claims 1 and 8-11 are pending. Claims 2-7 have been cancelled. Applicant's arguments have been fully considered but are not persuasive to overcome all grounds of rejection. All rejections not reiterated herein are hereby withdrawn. This action is made final.

Claim Rejections - 35 USC § 101

2. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

The pending claims have been reviewed in light of the Utility Examination Guidelines and Guidelines for Examination of Patent Applications under 35 U.S.C. 112, first paragraph, "Written Description" Requirement, Federal Register, Vol. 66, No. 4, pages 1092-1111, Friday, January 5, 2001.

The examiner is using the following definitions in evaluating the claims for utility.

"Specific" - A utility that is *specific* to the subject matter claimed. This contrasts with a *general* utility that would be applicable to the broad class of the invention.

"Substantial" - A utility that defines a "real world" use. Utilities that require or constitute carrying out further research to identify or reasonably confirm a "real world" context of use are not substantial utilities.

"Credible" - Credibility is assessed from the perspective of one of ordinary skill in the art in view of the disclosure and any other evidence of record that is probative of the applicant's assertions. That is, the assertion is an inherently unbelievable undertaking or involves implausible scientific principles.

"Well-established" - a specific, substantial, and credible utility which is well known, immediately apparent, or implied by the specification's disclosure of the properties of a material, alone or taken with the knowledge of one skilled in the art.

3. Claims 1 and 8-11 are rejected under 35 U.S.C. 101 because the claimed invention lacks a credible, substantial, specific or well-established utility.

The claims are drawn to substantially purified nucleic acids having the sequence of SEQ ID NO: 1 and nucleic acids having 90% to 100% complementarity to SEQ ID NO: 1. The claimed nucleic acids and proteins are not supported by either a specific and substantial asserted utility or a well-established utility. The specification fails to provide objective evidence of any activity for the claimed nucleic acids and proteins.

The specification (Table 1) teaches that the nucleic acid of SEQ ID NO: 1 was isolated from Arabidopsis thaliana. This nucleic acid encodes for an "unknown protein with Src homology 3 (SH3) domain profile." However, the specification has not established that the presence of the SH3 domain profile imparts a specific biological activity to the encoded protein. The specification (page 39) states that the claimed nucleic acids can be used to obtain other nucleic acids from the same species or to isolate homologous nucleic acids from other species. However, such uses lack a specific and substantial utility. Such uses allow only for the identification and analysis of other nucleic acids. Because a utility has not been established for the present nucleic acid, the use of this nucleic acid to search for additional nucleic acids does not constitute a "real world" context of use. The specification (page 39-40) further contemplates that the nucleic acid of SEQ ID NO: 1 can be used for mapping studies, linkage analysis, constructing of transgenic plants, screening for traits or screening for polymorphisms. However, these uses are applicable to a broad class of molecules since all plant nucleic acids could be used for these purposes. Thereby these uses are general and do not constitute a specific utility. While the use of the nucleic acid of SEQ ID NO: 1 in the disclosed methods may eventually lead one to the identification of

useful traits or specific polymorphisms or may eventually allow for the generation of transgenic plants, such uses constitute further research and experimentation and do not provide a readily-available, specific and substantial real-world use. It is further asserted that the nucleic acid of SEQ ID NO: 1 can be used for antisense methods to "prevent or reduce gene function" (see page 79 of the specification). However, since it is unclear as to the activity of the nucleic acid of SEQ ID NO: 1 and the protein encoded by SEQ ID NO: 1, the use of the claimed nucleic acids to block or prevent an unknown function constitutes further research. Thereby, the use of the claimed nucleic acids for antisense methods does not provide a substantial, real world use for the claimed nucleic acids. It is contemplated that the nucleic acid of SEQ ID NO: 1 can be used to synthesize protein, which could then be used in conducting further research to characterize the protein. However, the need for such research clearly indicates that the protein is not provided in a form that can be currently utilized for a real world purpose. Identifying and studying the properties of a protein or the mechanisms in which the protein is involved does not constitute a specific and substantial utility. The specification also suggests that the claimed proteins could be used to generate antibodies which could be used for detection purposes. Again, because a utility has not been established for the protein, use of the protein to generate antibodies to isolate and study proteins constitutes a research project and does not provide a specific and substantial utility. As stated in *Brenner v. Manson,* 383 US 519, 535-536, 148 USPQ 689, 696 (1966), "a patent is not a hunting license. It is not a reward for the search, but compensation for its successful conclusion." In the present case, Applicants have not established that the claimed

nucleic acid encodes for a protein with a specific biological activity, or that the nucleic acid or protein could be used to identify a particular trait or to detect a particular polymorphism of known function. Accordingly, the claimed invention is not supported by either a specific or substantial asserted utility or a well-established utility. Applicant is directed to the Utility Examination Guidelines, Federal Register, Vol. 66, No. 4, pages 1092-1099, Friday January 5, 2001.

Claim Rejections - 35 USC § 112

4. Claims 1 and 8-11 are also rejected under 35 U.S.C. 112, first paragraph. Specifically, since the claimed invention is not supported by either a specific and substantial asserted utility or a well established utility for the reasons set forth above, one skilled in the art would not know how to use the claimed invention.

Furthermore, the specification has not adequately taught one of skill in the art how to use nucleic acids comprise a nucleic acid which has 90%-100% identity with SEQ ID NO: 1. Claims 8-11 encompass nucleic acids comprising a nucleic acid sequence having 90%-100% identity with a nucleic acid sequence of SEQ ID NO: 1. The claims do not clarify whether such nucleic acids share identity over the full length of SEQ ID NO: 1. Thereby, it appears that claims 8-11 encompass nucleic acids containing fragments having 90%-100% identity with a fragment of SEQ ID NO: 1 and flanked by sequences of unspecified length and identity. Accordingly, the claims include nucleic acids and proteins from other species, naturally-occurring and non-naturally occurring mutated nucleic acids, allelic variants, and splice variants. The

specification has not adequately taught one of skill in the art how to use these nucleic acids. The specification has not established that species within this genus of nucleic acids and proteins have any particular biological activity and the specification has not provided sufficient guidance as to how to use the genus of claimed nucleic acids without undue experimentation.

RESPONSE TO ARGUMENTS:

In the response of June 14, 2004, Applicants traverse this rejection by arguing that they have met the conditions of providing the public with an invention having substantial utility wherein specific benefit exists in currently available form. Applicants state that, in particular, the claimed nucleic acids can be used to identify a polymorphism in a population of plants. However, this is not considered to be a specific and substantial utility. The utility is not specific because it is a property of all plant nucleic acids that they could be used to search for and try to identify a polymorphism. Further, the asserted utility is not substantial because it is a utility that is performed only to accomplish additional research. The specification does not teach any particular polymorphisms in SEQ ID NO: 1 and importantly does not teach any functional significance of any particular polymorphisms in SEQ ID NO: 1. Therefore, the nucleic acids of SEQ ID NO: 1 may only be used to search for polymorphisms and if such polymorphisms are identified then the functional/biological activities of the polymorphisms can potentially be elucidated. However, such research projects do not constitute a "real-world" use in currently available form.

Applicants further assert that the specification teaches that the nucleic acids may also be used as markers and probes; to identify and obtain nucleic acid homologues, in microarrays as gene-specific targets; for transformation of plants; to determine the level or expression of a protein or mRNA; to overexpress or suppress a desired protein. However, these utilities are all generic and are characteristic of all nucleic acids. Such uses do not constitute a specific utility. As with the use of a nucleic acid to detect polymorphisms, a substantial utility for the nucleic acid can only be elucidated once the function of the nucleic acid or the product encoded by the nucleic acid is determined. The present specification does not teach a specific functional or biological activity associated with the nucleic acid of SEQ ID NO: 1 or a protein encoded by SEQ ID NO: 1 or an association between the claimed nucleic acids and any particular condition in plants. In the absence of such information, the skilled artisan would not know how to interpret the results of methods which determine the expression of a mRNA or protein and would not know how to use a plant that was transformed with the claimed nucleic acids. Additionally, the use of the claimed nucleic acids as a probe to detect itself does not constitute a specific utility because the result of such a use would be meaningless without additional information regarding the significance of the nucleic acid. Further, the use of a nucleic acid in a microarray does not confer a patentable utility to the nucleic acid since this use is not specific to the claimed nucleic acid. All nucleic acids may be used in microarrays and thus this asserted use is not specific. Therefore, the asserted utilities are generic, rather than specific. Use of the claimed nucleic acids in the above

manners would not be meaningful in the absence of information regarding the specific biological activity or significance of these nucleic acids.

Applicants draw an analogy between golf clubs and nucleic acids. It is stated that "the golf club is generically hitting a golf ball, but is uniquely designed to hit the ball in a manner that is distinct from other clubs." Applicants cite *Carl Zeiss Stiftung v. Renishaw PLC* in support of their arguments. However, the cited decision was made with respect to a mechanical device and not with respect to a molecular compound to be used as a laboratory reagent or a research tool. The facts of the cited case do not correspond to those of the instant application since the utilities associated with a golf club do not compare to the utilities associated with a nucleic acid. While one knows how to use a golf club in a specific manner, one does not know how to use the claimed nucleic in a specific manner. The specification does not teach the skilled artisan how to use the claimed nucleic acids for a specific purpose (such as to "hit the ball in a manner that is distinct from other clubs"). Rather, the specification invites the skilled artisan to perform experimentation in order to determine how to use the claimed nucleic acids for a specific purpose.

Applicants further argue that the skilled artisan can determine the activity of the proteins encoded by SEQ ID NO: 1 based on Applicants disclosure and tools available to practioners in the art, e.g. BLASTX. However, providing tools and methods for searching for the biological activity of a protein is not equivalent to disclosing a specific and substantial utility for the claimed nucleic acids. Without information regarding the

actual functional properties of the disclosed nucleic acids, the nucleic acids can only serve as the starting point for conducting further experimentation.

Applicants state that the "Examiner ' must do more than merely question operability – [she] must set forth factual reasons which would lead one skilled in the art to question the objective truth of the statement of operability." This argument has been fully considered but is not persuasive to overcome the present grounds of rejection. As set forth above, the rejection is based on the finding that applicants have not disclosed a substantial, specific or well-established utility for the claimed invention. The facts supporting this conclusion are clearly set forth throughout the rejection. The instant situation is analogous to that which was addressed in *Brenner v. Manson*, 148 USPQ 689 (1966) wherein the court held that 35 U.S.C. 101 requires that an invention must have either an immediately apparent or fully disclosed "real world" utility. The court held that :

> "The basic quid pro quo contemplated by the Constitution and the Congress for granting a patent monopoly is the benefit derived by the public from an invention with substantial utility...[u]nless and until a process is refined and developed to this point where specific benefit exists in currently available form there is insufficient justification for permitting an appellant to engross what may prove to be a broad field...a patent is not a hunting license...[I]t is not a reward for the search, but compensation for its successful conclusion."

In the present situation, Applicants have not arrived at a "successful conclusion" as to the actual functional role or significance of the claimed nucleic acids. Without such information, the claimed nucleic acids can only be used as a starting point for conducting further experiments to arrive at a "successful conclusion."

5. Claims 8-11 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. This is a written description rejection.

The claims are drawn to substantially purified nucleic acids capable of specifically hybridizing with SEQ ID NO: 1, nucleic acids having 90% to 100% complementarity to SEQ ID NO: 1, and proteins encoded by a nucleic acid capable of specifically hybridizing with SEQ ID NO: 1. The specification teaches that SEQ ID NO: 1 is a nucleic acid isolated from Arabidopsis thaliana. Nucleic acids consisting of SEQ ID NO: 1 and proteins encoded by SEQ ID NO: 1 meet the written description requirements. However, the specification does not provide an adequate written description of the claimed genus of nucleic acids that specifically hybridize with SEQ ID NO: 1 or which having 90-99% identity with SEQ ID NO: 1. With respect to claims 2 and 3, the specification does not clearly define what is intended to be encompassed by nucleic acids which "specifically hybridize" with SEQ ID NO: 1. The specification (page 19) states that "(i)n a preferred embodiment," the claimed nucleic acids will specifically hybridize with SEQ ID NO: 1 under moderately stringent hybridization conditions. However, it is unclear as to what is intended to be encompassed by nucleic acids which "specifically hybridize" with SEQ ID NO: 1. Further, claims 8-11 encompass nucleic acids comprising a nucleic acid sequence having 90%-100% identity with a nucleic acid sequence of SEQ ID NO: 1. The claims do not clarify whether such nucleic acids share

identity over the full length of SEQ ID NO: 1. Thereby, it appears that claims 8-11 encompass nucleic acids containing fragments having 90%-100% identity with a fragment of SEQ ID NO: 1 and flanked by sequences of unspecified length and identity. Accordingly, the claims include nucleic acids and proteins from other species, naturally-occurring and non-naturally occurring mutated nucleic acids, allelic variants, and splice variants and fragments of said nucleic acids. However, the specification does not exemplify any specific nucleic acids which have 90-99% identity with SEQ ID NO: 1.

The claims define the nucleic acids and proteins in terms of their structure, but do not define the nucleic acids in terms of their functional properties. Accordingly, the claims are inclusive of nucleic acid molecules and proteins which have distinct biological activities from the nucleic acid of SEQ ID NO: 1 and the protein encoding by SEQ ID NO: 1. The specification has not clearly set forth a biological activity for the claimed nucleic acid or protein and has not exemplified any specific nucleic acids or proteins which have 90-99% identity with SEQ ID NO: 1 or the protein encoded thereby and which have a specific biological activity that is distinct from SEQ ID NO: 1.

The claims do not require that the nucleic acids share sequence identity over the full length of the molecule or that that nucleic acids which "specifically hybridize" with SEQ ID NO: 1 are of the same length as SEQ ID NO: 1. Further, the claims recite the open claim language "having." Thereby, the claims include nucleic acid fragments having 90-100% identity with SEQ ID NO: 1 wherein the sequences flanking said fragments are undefined. Thereby, the claims read on additional splice variants and

homologues which differ significantly from SEQ ID NO: 1 in terms of their structure and function.

The general knowledge in the art concerning homologues, mutants, allelic and splice variants does not provide any indication of how modification of the sequence of SEQ ID NO: 1 will effect the functional properties of SEQ ID NO: 1 and the protein encoded by SEQ ID NO: 1. The structure and function of one molecule does not provide guidance as to the structure and function of other molecules. Therefore, the description of one molecule (SEQ ID NO: 1) is not representative of a genus of homologues, splice, mutant and allelic variants of SEQ ID NO: 1 having unspecified functional activities different from that of SEQ ID NO: 1. *Vas-Cath Inc. V. Mahurkar*, 19 USPQ2d 1111, clearly states that "applicant must convey with reasonable clarity to those skilled in the art that, as of the filing date sought, he or she was in possession of the invention. The invention is, for purposes of the 'written description' inquiry, whatever is now claimed". Applicant is reminded that *Vas-Cath* makes clear that the written description provision of 35 USC 112 is severable from its enablement provision. In *The Regents of the University of California v. Eli Lilly* (43 USPQ2d 1398-1412), the court held that while Applicants are not required to disclose every species encompassed by a genus, the description of a genus is achieved by the recitation of a representative number of DNA molecules, usually defined by a nucleotide sequence, falling within the scope of the claimed genus. At section B(1), the court states that "An adequate written description of a DNA...'requires a precise definition, such as by structure, formula, chemical name, or physical properties', not a mere wish or plan for

obtaining the claimed chemical invention". The limited information provided in the specification is not deemed sufficient to reasonably convey to one of skill in the art that Applicants were in possession of the claimed homologues, mutants, allelic and splice variants of SEQ ID NO: 1 and proteins encoded thereby. Therefore, the written description requirement has not been satisfied for the claims as they are broadly written. Applicants attention is drawn to the Guidelines for the Examination of Patent Applications under 35 U.S.C. 112, ¶ 1 "Written Description" Requirement, Federal Register, Vol. 66, No. 4, pages 1099-1111, Friday January 5, 2001.

RESPONSE TO ARGUMENTS:

In the response of June 14, 2004, Applicants traverse this rejection by stating that the term comprising means that the claims are open for inclusion of unspecified ingredients. Applicants state that "[t]he Examiner attempts to turn the legal meaning of "having" on its head." It is asserted that Applicants need only describe "the claimed invention."

Applicants arguments have been fully considered but are not persuasive to overcome the present grounds of rejection. Applicants arguments are not clear as to how the examiner has turned the meaning of 'having' "on its head." The examiner has not given the term "having" any meaning different from that set forth by Applicants. That is, "having" has been interpreted to mean that the nucleic acids include the stated nucleotides and any other nucleotides. The claims recite the language of a nucleic acid molecule that "comprises **a** nucleic acid sequence." Thereby, the claimed nucleic acid molecules are defined only in terms of the fact that they include a portion of the nucleic

acid sequence of SEQ ID NO: 1. The nucleic acid molecules are also defined in terms of the fact that they have between 90-100% identity with "**a nucleic acid sequence** of SEQ ID NO: 1 or complement thereof." Thereby, the nucleic acid molecules need not have 90-100% identity with the full length sequence of SEQ ID NO: 1, but may comprise a sequence which shares 90-100% identity with any portion of SEQ ID NO: 1. For these reasons, the claims include nucleic acid molecules comprising 1 or 2 or 3 nucleotide of SEQ ID NO: 1 and nucleic acid molecules comprising a sequence having 90-100% identity with a fragment of 1 or 2 or 3 nucleotides etc of SEQ ID NO: 1, wherein said nucleic acid molecules are flanked by any number of nucleotides of any identity. Applicants have disclosed a single nucleic acid consisting of SEQ ID NO: 1. Applicants have not disclosed any additional members of the broadly claimed nucleic acid molecules. Thereby, Applicants have not in fact described "the claimed invention."

Applicants state that they had possession of the nucleic acid molecules of SEQ ID NO: 1 and sequences with the recited identity to SEQ ID NO: 1. However, Applicants do not in fact disclose any nucleic acids that share 90-99% identity with SEQ ID NO: 1. The claims include nucleic acids from other species, naturally-occurring and non-naturally occurring mutated nucleic acids, allelic variants, and splice variants and fragments of said nucleic acids. However, the specification does not exemplify any nucleic acids which fall within the claimed genus, other than the nucleic acid of SEQ ID NO: 1. It is stated that the specification describes gene sequences, corresponding sequences from other species, mutated species, SNPs, polymorphic sequences, promoter sequences, and exogenous sequences. However, a general statement in the

specification of a desire to obtain gene sequences, homologues from other species, mutated species, SNPs, polymorphic sequences, promoter sequences and exogenous sequences is not equivalent to providing a clear and complete description of specific sequences which fall within the claimed genus of nucleic acids.

Applicants assert that the written description requirement has been meet because Applicants have disclosed a common structural feature for the claimed nucleic acids, i.e. the sequence of SEQ ID NO: 1. However, the claims are not limited to this common structural feature. Claims 8-11 are not drawn to nucleic acids consisting of the sequence of SEQ ID NO: 1. . Rather, claims 8-11 include nucleic acids comprising a sequence which share 90-100% identity with any fragment of SEQ ID NO: 1. Thereby, the common structural feature of the complete sequence of SEQ ID NO: 1 is lacking from claims 8-11. Further, In *The Regents of the University of California v. Eli Lilly* (43 USPQ2d 1398-1412), the court in fact held that "An adequate written description of a DNA...'requires a precise definition, such as by structure, formula, chemical name, or physical properties', not a mere wish or plan for obtaining the claimed chemical invention". Describing a nucleic acid in terms of the fact that it shares 90-99% identity with SEQ ID NO: 1 does not provide a precise definition for the nucleic acid. The specification does not describe the location or identity of nucleotides which may be varied within SEQ ID NO: 1, and does not describe the functional activity or other biological role associated with such variants. The specification does not disclose any specific variants of SEQ ID NO: 1 which have a functional activity or biological role distinct from that of SEQ ID NO: 1. Thereby, it is maintained that the written description

requirements have not been adequately met for the broadly claimed genus of homologues, splice, mutant and polymorphic variants of SEQ ID NO:1.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Carla Myers whose telephone number is (571) 272-0747. The examiner can normally be reached on Monday-Thursday from 6:30 AM-5:00 PM. A message may be left on the examiner's voice mail service. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gary Benzion, can be reached on (571)-272-0782.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to (571) 272-0547.

Patent applicants with problems or questions regarding electronic images that can be viewed in the Patent Application Information Retrieval system (PAIR) can now contact the USPTO's Patent Electronic Business Center (Patent EBC) for assistance. Representatives are available to answer your questions daily from 6 am to midnight (EST). The toll free number is (866) 217-9197. When calling please have your application serial or patent number, the type of document you are having an image problem with, the number of pages and the specific nature of the problem. The Patent Electronic Business Center will notify applicants of the resolution of the problem within 5-7 business days. Applicants can also check PAIR to confirm that the problem has been corrected. The USPTO's Patent Electronic Business Center is a complete service

center supporting all patent business on the Internet. The USPTO's PAIR system provides Internet-based access to patent application status and history information. It also enables applicants to view the scanned images of their own application file folder(s) as well as general patent information available to the public.

For all other customer support, please call the USPTO Call Center (UCC) at 800-786-9199.

Carla Myers
September 7, 2004

CARLA J. MYERS
PRIMARY EXAMINER